CLAIMS

What is claimed is:

1. A unitary electrically shielded panel installable in an electronic equipment enclosure for electrically sealing an aperture defined in the enclosure against passage of electromagnetic radiation, said electrically shielded panel comprising:

an electrically non-conductive rigid panel part having a periphery; and

a substantially planar electrically conductive shield formed unitarily with said panel part and substantially coextensive with said panel part so that said shield overlaps and extends beyond said periphery of said panel part so that said electrically shielded panel operatively reduces passage of electromagnetic energy through the enclosure aperture when said electrically shielded panel is sealingly placed over the enclosure aperture.

2. The shielded panel of claim 1, wherein said shield comprises a gasket that electrically connects said shielded panel to the enclosure when said shielded panel is installed in the enclosure.

3. The shielded panel of claim 1, wherein said shield is chemically bound to said panel part.

4. The shielded panel of claim 1, wherein said panel part is formed from a thermoplastic.

5. The shielded panel of claim 4, wherein said panel part is formed from polyetherimide.

6. The shielded panel of claim 4, wherein said shield is formed from a thermoplastic elastomer.

7. The shielded panel of claim 6, wherein said shield comprises a gasket that electrically connects said shielded panel to the enclosure when said shielded panel is installed in the enclosure.

8. The shielded panel of claim 6, wherein said shield is chemically bound to said panel part.

9. The shielded panel of claim 1, wherein said panel part periphery defines a panel part footprint and said shield has a periphery that defines a shield footprint, at least a portion of said shield footprint being larger than said panel part footprint.

10. The shielded panel of claim 1, wherein said shielded panel is configured as a faceplate for a circuit-pack having a circuit ground, said panel part and said shield have a plurality of apertures defined therein, said panel part further comprising a mounting tab for mounting the circuit-pack to said shielded panel, said shield further comprising a conductive tab for electrically connecting the circuit ground to said shield and thereby electrically connecting the circuit ground and said shield to the electronic enclosure when said shielded panel is installed in the enclosure.

11. A method of forming during a single forming operation an electrically shielded panel unitarily formed of an electrically non-conductive rigid part and a substantially planar and coextensive electrically conductive shield, said method comprising the steps of:

(a) introducing an electrically non-conductive thermoplastic in a flowable state into a first part of a cavity defined in a tool, the tool cavity having a second part having an articulatable core sized and shaped to fit within the second part of the tool cavity and initially disposed therein;

(b) permitting the electrically non-conductive flowable-state thermoplastic to at least partly solidify within the first part of the tool cavity;

(c) following said step (b), articulating the core so as to remove the core from the second part of the tool cavity; and

(d) following said step (c), introducing into the second part of the tool cavity an electrically conductive elastomer that bonds with the electrically non-conductive

thermoplastic in the first part of the cavity to form a unitary electrically shielded panel having an electrically non-conductive rigid part and a substantially planar and coextensive electrically conductive shield.

12. The method of claim 11, wherein the bond between the electrically conductive elastomer and the electrically non-conductive thermoplastic is at least partly a chemical bond.

13. The method of claim 12, wherein the bond between the electrically conductive elastomer and the electrically non-conductive thermoplastic is at least partly a mechanical bond.

14. The method of claim 11, wherein said electrically non-conductive thermoplastic comprises polyetherimide.

15. The method of claim 14, where said step (b) further comprises waiting between approximately 15 to 30 seconds for the non-conductive thermoplastic to at least partly solidify.

16. The method of claim 11, wherein said step (a) further comprises injecting the electrically non-conductive rigid thermoplastic into the first cavity part under high pressure,

and said step (d) further comprises injecting the electrically conductive elastomer into the second cavity part under high pressure.

17. The method of claim 16, wherein said electrically non-conductive thermoplastic comprises polyetherimide.

18. The method of claim 17, where said step (b) further comprises waiting between approximately 15 to 30 seconds for the non-conductive thermoplastic to at least partly solidify.

19. The method of claim 11, wherein said step (a) further comprises injecting the electrically non-conductive rigid thermoplastic into the first cavity part under low pressure, and said step (d) further comprises injecting the electrically conductive elastomer into the second cavity part under low pressure.

20. The method of claim 19, wherein said electrically non-conductive thermoplastic comprises polyetherimide.

21. The method of claim 20, where said step (b) further comprises waiting between approximately 15 to 30 seconds for the non-conductive thermoplastic to at least partly solidify.

22. A unitary electrically shielded panel installable in an electronic equipment enclosure for electrically sealing an aperture defined in the enclosure against passage of electromagnetic radiation, said electrically shielded panel comprising:

an electrically non-conductive rigid panel part formed by introducing an electrically non-conductive thermoplastic in a flowable state into a first part of a cavity defined in a tool, the cavity having a second part having an articulatable core initially disposed therein; and

a substantially planar electrically conductive shield formed unitarily with said panel part and substantially coextensive with said panel part and formed by articulating the core from the second part of the tool cavity so as to remove the core from the second part of the tool cavity after said forming of said rigid panel part and thereafter introducing into the second part of the tool cavity an electrically conductive elastomer that chemically bonds together with said panel part in the first part of the tool cavity so that said shield overlaps said panel part to thereby form said electrically shielded panel for operatively reducing passage of electromagnetic energy through an aperture of an enclosure when said electrically shielded panel is sealingly placed over the enclosure aperture.

23. The shielded panel of claim 22, wherein said shield comprises a gasket that electrically connects said shielded panel to the enclosure.

24. The shielded panel of claim 22, wherein said panel part is formed from polyetherimide.

25. The shielded panel of claim 24, wherein said shield is formed from a thermoplastic elastomer.

26. The shielded panel of claim 25, wherein said shield comprises a gasket that electrically connects said shielded panel to the enclosure when said shielded panel is installed in the enclosure.